N.V.K.S.D. COLLEGE OF EDUCATION, ATTOOR

(AUTONOMOUS)
M.Ed. Degree Third Semester Examination, January 2021
(For the candidates admitted for the academic year 2019-2021)

Specialization Based on Discipline: ADVANCED METHODOLOGY IN MATHEMATICS EDUCATION
Course code: MED3SD02

Time: 3 Hours   **Maximum Marks: 70**

SECTION A (10x1 = 10 marks)
Answer ALL the questions by selecting the appropriate answers.

1. The term 'Mathematics' was coined by
   a) Indians   b) Babylonians   c) Egyptians   d) Pythagorians
2. Cognitive development model was developed by
   a) Piaget   b) Bruner   c) Suchman   d) Gagne
3. Learning approach which holds that learner actively make his/her own knowledge is
   a) Behaviourism   b) Constructivism   c) Information processing   d) Cognitive model
4. The spiral curriculum was proposed by
   a) Piaget   b) Gagne   c) Bruner   d) Suchman
5. Concept attainment model comes under
   a) Behaviour modification model   b) Personal development model
   c) Social interaction model   d) Information processing model
6. The theory which stipulates that there are different types or levels of learning was advocated by
   a) Bruner   b) Piaget   c) Gagne   d) Suchman
7. Three-dimensional chart giving the placement of the objectives, content and form of questions is
   a) Concept map   b) Tool design   c) Mind map   d) Blueprint
8. The term 'action research' was coined by
   a) Piaget   b) Robert Gagne   c) Kurt Lewin   d) Jerome Bruner
9. Validity of a test refers to the
   a) Purposiveness   b) Consistency   c) Trustworthiness   d) Stability
10. A test which identifies the specific areas of strengths and weaknesses of an individual is
    a) Performance test   b) Achievement test   c) Prognostic test   d) Diagnostic test

SECTION B (5x3 = 15 marks)
Answer all the FIVE questions in about 100 words each.

11. Write a short note on the nature of Mathematics.
12. What is Techno Pedagogic Content Knowledge?
13. What is the need for updating mathematics curriculum?
14. Write a short note on online learning.
15. List the steps in the preparation of a blog.

SECTION C (5x5 = 25 marks)
Answer any FIVE questions in about 200 words each.

16. Describe the aims of teaching Mathematics as suggested by NCF2005.
17. Describe the use of web based lessons and multimedia presentations in mathematics instruction.
18. Bring out the importance of portfolio assessment.
19. Discuss the nature and aspects of evaluation of Mathematics curriculum.
20. Explain Inquiry training model of teaching Mathematics.
21. Explain the preparation of a diagnostic test in Mathematics.
22. How does action research help in the teaching learning of Mathematics?

SECTION D (2x10 = 20 marks)
Answer BOTH the questions in about 500 words each.

23. a) Discuss the development of Mathematics in 20th and 21st century.
    (or)
    b) Explain the contingency management model of teaching Mathematics.
24. a) Analyse the implications of theories of Piaget and Bruner in Mathematics curriculum construction.
    (or)
    b) Explain the process of construction and standardisation of an achievement test in Mathematics.